

## ABSTRACT

The isolation, purification, characterization and use of a mitochondrial pyruvate dehydrogenase kinase (PDHK) gene from *Brassica* spp.. Methods of regulating fatty acid synthesis, seed oil content, seed size/weight, flowering time, vegetative growth, respiration rate and generation time using the gene and to tissues and plants transformed with the gene. Transgenic plants, plant tissues and plant seeds having a genome containing an introduced Brassica DNA, characterized in that the sequence has been introduced in an anti-sense or sense orientation, and a method of producing such plants and plant seeds.